

What is Claimed is:

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A 1. A method for protecting data entry to a data entry device from eavesdropping comprising the steps of:

masking a signature of entry resulting from entry of data by a user of the data entry device so as to reduce the detectability of the signature by eavesdropping.

2. A method according to Claim 1

wherein the signature comprises a temperature differential in the data entry device from data entry by the user, and

5 wherein the step of masking comprises controlling the external temperature of the data entry device to reduce temperature differentials left in the data entry device by the user.

3. A method according to Claim 1 wherein the data entry device is a keyboard.

4. A method according to Claim 1 wherein the data entry device has external surfaces that are thermally conductive.

5. A method according to Claim 1 wherein the data entry device has external surfaces that are thermally resistive.

6. A method according to Claim 2 wherein the step of controlling comprises the step of maintaining the external temperature in a range surrounding a predetermined setpoint.

7. A method according to Claim 6 wherein the step of maintaining the external temperature comprises the steps of:

monitoring the external temperature of the data entry device to provide a device temperature, and

5 adjusting the output of a temperature control mechanism responsive to the device temperature so as to maintain the device temperature at approximately the setpoint.

8. A method according to Claim 6 wherein the predetermined setpoint is between 35-40°C.

9. A method according to Claim 2 wherein the controlling step comprises the step of controlling the external temperature utilizing conduction.

10. A method according to Claim 2 wherein the controlling step comprises the step of controlling the external temperature utilizing convection.

11. A method according to Claim 10 wherein the step of controlling the external temperature utilizing convection comprises blowing a stream of temperature-controlled air in proximity to the data entry device.

12. A method according to Claim 2 wherein the controlling step comprises the step of controlling the external temperature utilizing radiation.

13. A method according to Claim 12 wherein the step of controlling the external temperature utilizing radiation comprises emitting heat from an infrared-emitting lamp in proximity to the data entry device.

14. A method according to Claim 1
wherein the signature comprises sound waves emitted from the data entry device, and

5 wherein the step of masking comprises masking sound waves emitted from the data entry device to reduce the detectability of the sound waves.

15. A method according to Claim 14 wherein the step of masking sound waves comprises generating an interfering sound pattern so as to reduce the detectability of the sound waves.

16. A method according to Claim 15 wherein the step of generating comprises the steps of:

- 5 receiving the signature,
 converting the signature to an electrical signal,
 phase-shifting the electrical signal,
 converting the phase-shifted electrical signal to an audio signal, and
 emitting the audio signal in close proximity to the data entry device.

17. A method according to Claim 15 wherein the step of generating comprises emitting pre-recorded sounds.

18. A method according to Claim 17 wherein the pre-recorded sounds are recorded sounds of random input to the data entry device.

19. A method according to Claim 15 wherein the step of generating comprises providing background noise to mask the sound waves emitted from the data entry device.

20. A method according to Claim 19 wherein the background noise is provided by a blower.

21. A method according to Claim 20 wherein the blower blows a stream of temperature-controlled air in proximity to the data entry device controlling the external temperature of the data entry device to reduce temperature differentials left in the data entry device by the user.

22. A method according to Claim 14 wherein the step of masking comprises providing a sound-dampening device on the data entry device.

23. A system for protecting data entry to a data entry device from eavesdropping comprising:
 a data entry device, and

5 means for masking a signature of entry resulting from entry of data by a user of the data entry device so as to reduce the detectability of the signature by eavesdropping.

24. A system according to Claim 23 wherein the data entry device is a keyboard.

25. A system according to Claim 23 wherein the means for masking comprises means for establishing the external temperature of the data entry device to reduce temperature differentials left in the data entry device by the user.

26. A system according to Claim 25 wherein the means for establishing comprises a resistive heating source operably associated with the data entry device so as to maintain the external temperature in a range surrounding a predetermined setpoint.

27. A system according to Claim 26 wherein the resistive heat source comprises a heating element formed as part of the data entry device.

28. A system according to Claim 25 wherein the means for establishing comprises a radiant heat source operably associated with the data entry device so as to maintain the external temperature in a range surrounding a predetermined setpoint.

29. A system according to Claim 28 wherein the radiant heat source comprises an infrared emitting lamp which radiates heat in proximity to the data entry device.

30. A system according to Claim 25 wherein the means for establishing comprises a convection heat source operably associated with the data entry device so as to maintain the external temperature in a range surrounding a predetermined setpoint.

31. A system according to Claim 30 wherein the convection heat source comprises a blower which provides a stream of air in proximity to the data entry device.

32. A system according to Claim 23 wherein the means for masking comprises a feedback control circuit which provides a closed loop feedback control of the temperature wherein the feedback control circuit comprises:

5 a temperature sensor operably associated with the data entry device so as to measure the external temperature of the data entry device, and

a control circuit operably associated with the temperature sensor and with means for controlling temperature so as to control the means for establishing the external temperature of the data entry device based on the sensed temperature.

33. A system according to Claim 23 wherein the means for masking comprises means for masking sound waves emitted from the data entry device to reduce the detectability of the sound waves.

34. A system according to Claim 33 wherein the means for masking sound waves comprises means for generating an interfering sound pattern so as to reduce the detectability of the sound waves.

35. A system according to Claim 34 wherein the means for generating comprises a noise cancellation circuit which cancels the sound waves emitted by the data entry device wherein the noise cancellation circuit comprises:

5 a microphone operably associated with the data entry device so as to receive sound waves from the entry of data by a user into the data entry device,

a first converting means operably associated with the microphone so as to convert the sound waves into an electrical signal,

a phase-shifting means operably associated with the first converting means so as to shift the phase of the electrical signal to produce a phase-shifted electrical signal,

10 a second converting means operably associated with the phase-shifting means so as to convert the phase-shifted electrical signal to an audio signal, and

an emitting means operably associated with the second converting means so as to emit the audio signal in close proximity to the data entry device.

36. A system according to Claim 34 wherein the means for generating comprises a sound generator operably associated with the data entry device so as to generate an interfering sound pattern so as to reduce the detectability of the sound waves.

37. A system according to Claim 36 wherein the sound generator comprises a speaker which emits pre-recorded sounds.

38. A system according to Claim 37 wherein the pre-recorded sounds are recorded sounds of random input into the data entry device.

39. A system according to Claim 36 wherein the sound generator comprises a blower which disrupts the sound waves by blowing a stream of air in proximity to the data entry device.